

REMARKS/ARGUMENT

Description of amendments

In the specification, Applicant has inserted the description of Fig. 3b and replace reference numerals 2 and 3 (for shaft ends) with reference numerals 1 and 2.

Claims 20, 21, 23, 25, 27, 29, 30, 36, 37, 39-41, 44-46, 48-50, and 56 are now pending and under examination. Applicant has amended all pending claims. No new matter has been added.

Objections to the drawings

In Paragraphs 4 of the Office Action, Applicant's corrected drawings were disapproved for the two reasons. First, the Office Action stated that the submitted drawing sheet including Figure 3 did not include Figure 3a. Applicant respectfully submits that Figure 3a submitted with the response of May 29, 2001 is not on the drawing sheet including Figure 3. Instead Figure 3a was submitted on a separate sheet that does not include any other figure.

Second, the Office Action stated that Figure 3b is not described in the Brief Description of Drawings. Applicant has added a description of Figure 3b in the Brief Description of Drawings.

Accordingly, Applicant respectfully requests approval the amended drawing changes.

In Paragraphs 5.a.i and 5.a.ii of the Office Action, the Examiner contended that the drawings do not show the limitation that the slide bushing is resiliently held by the socket. Applicant respectfully traverses the objection because Figs. 5 and 5a show the limitation. See also the description of Figs. 5 and 5a, in particular the description of the spring fingers (38) holding the bushing (11) in the tumbler sleeve (30) (or socket (7)).

In Paragraph 6, the Office Action contended that the socket (7) shown in Fig. 3 cannot resiliently pivot relative to the fork (6). Applicant respectfully traverses the objection because the socket pivots when one side of the socket moves axially to compress the plate springs (31) while the opposition side does not move axially. Further, since the axial movement of one side of the socket compresses the plate springs (31), the axial movement is resilient.

Objections to the specification

Regarding Paragraph 7.a of the Office Action, Applicant has replaced reference numerals 2 and 3 with reference numeral 1 and 2 in the first paragraph on page 8 of the specification.

In Paragraph 8 of the Office Action, the Examiner contended that certain claim languages are not in the specification. Applicant respectfully traverses the rejection because the claim languages are described in the specification. See the description of Figs. 5 and 5a in the second full paragraph on page 11 of the original English specification (the socket (7) and the tumbler sleeve (30) can be the same element)). See also Figures 5 and 5a.

Objection to the claims

Regarding Paragraph 7.a of the Office Action, the Examiner contended the word “pivotably” is misspelled and suggested that the word is a misspelling of the word “pivotally.” Applicant used the word “pivotably” to mean “capable of being pivoted.” The word “pivotally,” on the other hand, means “of, relating to, or serving as a pivot,” which is different from the meaning intended by Applicant.

Rejection under 35 U.S.C. §112, first paragraph

Claims 41, 45, 48 and 49 were rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification. The Examiner contended that certain features of claims 41 and 45 are not described in “the drawings of the elected species” and by “the description of the elected species.”

Applicant respectfully traverses the rejection, because 35 U.S.C. §112, first paragraph, does not require that “the drawings of the elected species” show or “the description of the elected species” describe the claim limitations. 35 U.S.C. §112, first paragraph, only requires that the specification describe the claimed invention. If the Examiner maintains the rejection, Applicant respectfully requests that the Examiner explain why 35 U.S.C. §112, first paragraph, requires that the drawings and description of the elected species describe the claimed invention. (Note: as stated above, the rejected claim languages are shown in Figures 5 and 5a, in particular Figure 5a, and described by the description of Figures 5 and 5a in the specification.)

Rejections under 35 U.S.C. §112, second paragraph

Claims 20, 21, 23, 25, 27, 29, 30, 36, 37, 39-41, 50, and 56 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended claims 20, 27, 29, and 50 to overcome the rejection.

Rejection under 35 U.S.C. §101

All claims under examination were rejected under 35 U.S.C. §101 as lacking patentable utility. For the following reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Examiner rejected all claims as lacking industrial utility on the ground that (1) the only known use for Applicant's double joint is as a constant velocity joint (citing "Universal Joint and Driveshaft Design" at the third full paragraph in the 2nd column on page 100) and (2) Applicant's double joint is not a constant velocity joint.

Applicant respectfully submits that even assuming, *arguendo*, that Applicant's double joint is not a constant velocity joint, it does not mean that the joint has no utility. There is nothing that can prevent a non-constant velocity double joint from being used in an application that does not require a constant velocity joint. Applicant simply does not understand why the Examiner stated that the only known use for Applicant's double joint is as a constant velocity joint. In order to provide Applicant an opportunity to provide a specific response, Applicant respectfully requests that the Examiner provide an explanation for his statement.

Applicant has carefully examined the third full paragraph in the 2nd column on page 100 of "Universal Joint and Driveshaft Design" but could not find anything that can be considered as supporting the statement that only known use for Applicant's double joint is as a constant velocity joint. This paragraph merely states that constant velocity can be produced by designs which do not incorporate rolling elements and that the most common example of these designs is the double Cardan joint. This, however, does not support the Examiner's statement. If the Examiner maintains that this document supports his statement, Applicant respectfully requests that the Examiner provide an explanation so that Applicant is given the opportunity to prepare a suitable response.

Further, whether a double joint, regardless whether it is or is not a constant velocity joint theoretically, can be used in an application that calls for a constant velocity joint depends on how close the double joint is to a constant velocity joint and also on how

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stringent the design requirements are. In fact, no joints, as manufactured, are a constant velocity joint due to manufacturing tolerances. A double joint, which is not a constant velocity joint theoretically, can be made as close as possible to a theoretical constant velocity joint and can be made even closer to a constant velocity joint than a theoretical constant velocity joint due to the manufacturing tolerances of the theoretical constant velocity joint. Therefore, it cannot be said categorically that a double joint, which is not a constant velocity joint theoretically, cannot be used in an application which calls for a constant velocity joint.

Additionally, in the rejection under 35 U.S.C. §102, the Examiner contended that Applicant's double joint is anticipated by a joint which is described in Kelmke (CA 604,536) as a constant velocity joint. In effect, the Examiner contended in the rejection under 35 U.S.C. §102 that Applicant's double joint is a constant velocity joint. This clearly contradicts the Examiner's statement in the rejection under 35 U.S.C. §101. Further, the Examiner contended that Applicant's double joint is anticipated by each of the joints described in Kelmke and Curtis (US 2,024,912). Does this mean that the Examiner also believe that the Kelmke and Curtis joints have no patentable utility?

Finally, with regard to patentable utility, the claimed double joint of the present application is similar to the double joint described and claimed in US Patent Application No. 09/600,556, which was also examined by Examiner Binda and has issued into a U.S. patent. Exactly this version of the double joint has been sold in hundreds of thousands and have been used in Ford and Audi cars sold in the U.S. and Europe. There is simply no question to a person with ordinary skill in the art that Applicant's double joint has patentable utility.

Rejections under 35 U.S.C. §102

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Claims 20, 21, 23, 36, 40, 44, and 46 were rejected under 35 U.S.C. §102(b) as being anticipated by Helmke (CA 604,536). For the following reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Each of independent claims 20 and 44 recites that a ball (or a ball joint) is at one of the two shaft ends and is slidingly movable in the direction of the shaft axis of the other shaft end. This feature is not taught or suggested by Helmke.

The Examiner contended that the sphere (10) of Helmke is equivalent to the ball of claims 20 and 44, the shell (13) of Helmke is equivalent to the socket of claims 20 and 44, and the shaft part (21) of Helmke is equivalent to the other shaft end of the claims 20 and 44. Applicant respectfully disagrees.

First, Helmke does not describe a double joint.

Second, the sphere (10) cannot slide in the direction of the axis of the shaft part (21). In fact, the housing part (29) ensures that the sphere (10) is always at the same position along the axis of the shaft part (21).

Therefore, for any one of the these two reasons, independent claims 20 and 44, as well as the dependent claims, are not anticipated by Helmke.

Claims 20 and 44 were rejected under 35 U.S.C. §102(b) as being anticipated by Curtis (U.S. Patent 2,024,912). For the following reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection.

The Examiner contended that the ball (1) of Curtis is equivalent to the ball of claims 20 and 44, the U-shaped member (15) of Curtis is equivalent to the socket of claims 20 and 44, and the left coupling (6) of Curtis is equivalent to the other shaft end of the claims 20 and 44. The Examiner also contended that the U-shaped member (15) of Curtis is resiliently

pivotably mounted to the left coupling (6) of Curtis. The Examiner further contended that the pin (19) and pin head (20) are equivalent to the housing of claims 20 and 44. Applicant respectfully disagrees.

First, Curtis does not describe a double joint.

Second, the pin (19) and pin head (20) are not a housing at all and are not used to join two single joints as does the housing of claims 20 and 44.

Third, the U-shaped member (15) of Curtis is not resiliently pivotably mounted to the left coupling (6) of Curtis. The U-shaped member (15) is fixedly engaged in the tapered slots (11) of the left coupling (6) (column 2, lines 39-47, on page 1), and the pin (19) engages against the inner surfaces (21) of the legs (16) of the U-shaped member (15) to lock the U-shaped member (15) in position (column 1, lines 3-6, on page 2). Therefore, the U-shaped member (15) is fixed to the left coupling (6).

Fourth, the ball (1) of Curtis cannot slide in the direction of the axis of the left coupling (6), because the U-shaped member (15) is fixed to the left coupling (6) and because the ball (1) cannot slide in the U-shaped member (15) in the direction of the axis of the left coupling (6) (the distance between the legs (16) of the U-shaped member (15) narrows in the direction of the opening so the ball (1) cannot move in that direction).

For any one of these reasons, independent claims 20 and 44, as well as the dependent claims, are not anticipated by Curtis.

Rejection under 35 U.S.C. §103(a)

The validity of the rejection under 35 U.S.C. §103(a) depends on the validity of the rejection under 35 U.S.C. §102. Because the rejection under 35 U.S.C. §102 is invalid as discussed above, the rejection under 35 U.S.C. §103(a) is also invalid.


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In light of the foregoing remarks, this application is considered to be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

A Request to Reset Period for Reply Due to Late Receipt of Notification is being filed herewith. In light of the discrepancy between the date on the Office Action and the date the action was actually mailed, it is believed that no extension fee is required. However, the Commissioner is hereby authorized to charge any requisite fee to Deposit Account No. 05-1323 (CAM #037272.49027US).

Respectfully submitted,

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